

ABSTRACT OF THE DISCLOSURE

An optical signal encoder/decoder includes a grating waveguide having an identical number of uniform pitch gratings to the number of code chips of a binary phase optical code, the uniform pitch gratings being formed in a waveguide direction to reflect light of a predetermined wavelength. Here, adjacent gratings corresponding to a position at which the optical code value changes are disposed a spacing apart from each other to give a phase shift of $(2m+1)\pi/2$ to the light, and the remaining adjacent gratings are disposed a spacing apart from each other to give a phase shift of $n\pi$ to the light (m, n: integer).